Name _____ Date _____

Dew Point

Have you ever walked across the grass in the early morning and noticed water droplets on the grass when it did not even rain the night before? This is called dew. Dew is formed from the moisture (water vapor) in the air. Air continually soaks up water that evaporates from oceans, rivers, streams, puddles, and plants. This water is in the form of water vapor (a gas). As the air cools, it reaches a point when it can hold no more water vapor. When the air becomes saturated (can hold no more), moisture condenses and tiny droplets of water form. These drops of water stick to objects around them, including dust particles in the sky (like a cloud), or grass, twigs, and spider webs.

The temperature at which the moisture in the air actually condenses to form water drops is called the dew point.

Try this simple activity to understand saturation:

1. Place a sponge in a tray and predict how many spoonfuls of water the sponge will hold without any water dripping out of it.

   Prediction: If I pour _____ spoonfuls of water on to the sponge, then the water will begin to drip out.

2. Pour in one spoonful of water at a time, keeping track of how many tablespoons were added. You may need to add the water along the edges of the sponge so it completely fills the sponge. Take your time.

3. When the sponge begins to drip water, that is the point of saturation, that is, the sponge is not capable of holding any more water.

   When I poured water onto a sponge, the sponge was able to hold _____ spoons of water before it began to leak out.

Try this simple activity to find the dew point in the atmosphere of the classroom.

1. Fill a metal can with ice cubes and water.
2. Place a thermometer in the water and slowly stir.
3. Carefully observe the sides of the can. The moment you see tiny water droplets forming on the outside of the can (or a cloudy look), remove the thermometer and record the temperature. This temperature is the dew point.

The dew point in the classroom is _____ degrees.

Are you ready for a quiz? Test yourself! Finish the sentences.

The dew point is the _____ where moisture in the air _____. As the sun's heat _____ moisture from the air, the water changes to an invisible gas called _____ _____. When the temperature cools down, the water vapor _____, or turns the gas back to a liquid. These drops of water are called _____ and form on plants, windows, and cars.

If you need a word bank, here are some clues.

evaporates	water vapor	dew
condenses	temperature	condenses

Cool Facts:

#1 If the dew point is below freezing, frost will form on the ground.

#2 If the tiny water droplets are very fine, they may hang in the air as mist or fog. Fog is like a cloud that has fallen to the ground.